



### Role of Standardized Patients in Medical Education

**Michael H. Nagoshi MD, FACP**  
Assistant Professor, Department of Medicine  
**John A. Burns School of Medicine**  
University of Hawaii

#### Introduction

Standardized or simulated patients (SP's), persons who play the role of patients, have been a part of medical education for over 35 years.<sup>1</sup> The John A. Burns School of Medicine (JABSOM), like many medical schools, has a tradition of using professional patients to assist in teaching specialized physical examination skills including breast, genital and pelvic examinations. JABSOM initiated the development of a Standardized Patient Program in 1989.

Volunteers from the community often serve as both patient and instructor but generally do not portray patients with illnesses. With sufficient training, SPs are able to portray patients with specific medical problems in a consistent, "standardized" manner and to make systematic observations of the bedside clinical skills of the student's who are interviewing or examining them. Consequently, an increasing number of medical schools have developed standardized patient programs to expand the use of SPs to the teaching and assessment of communication and interpersonal skills, history taking and physical diagnosis.<sup>2</sup> Some SPs have real clinical findings (e.g. heart murmur); others are carefully trained to simulate real findings (e.g. rebound tenderness). Although they cannot replace real patients seen in actual patient care settings, SP experiences have become valuable educational tools.

#### Using SP's for Teaching

The SPs provide direct, hands-on patient care experiences that medical students might not otherwise have and allow the practice of clinical skills in a safe environment (analogous to the way a flight-simulator allows a pilot to practice before flying a real aircraft). Patients with specific medical problems can be made available when they would best fit the medical school curriculum. During the first unit of the curriculum, students interview SP's who portray patients described in specific Health Care Problems, the written case scenarios that form the basis of the Problem Based Learning (PBL) Curriculum. The SP experiences "bring to life" the paper-based problems. The encounters are videotaped and reviewed in small groups. Relevant concepts related to the doctor-patient relationship, interviewing and communication skills are discussed and individual feedback is given to the students. During the cardiovascular unit, every student evaluates a SP with congestive heart failure and during the gastroenterology subunit, a SP with diarrhea.

SPs can be used to create clinical situations for teaching healthcare providers in ways that are not possible during the course of actual patient care. Every medical student independently examines a SP presenting with an acute abdomen, an experience only serendipitously

afforded to a few students while working on clinical clerkships and when available, is usually reserved for the more experienced residents and interns. Internal Medicine Residents are asked to inform an SP, who portrays a patient presenting with epigastric pain that she has metastatic cancer. The encounter is observed by a faculty member who provides feedback and instruction on communication techniques to use when delivering bad news. The SP also provides feedback to the resident on his/her bedside manner.

#### Clinical Skills Evaluation

The Center for Clinical Skills (CCS), at the Kuakini Medical Center is responsible for the development and implementation of the JABSOM SP Program. The program utilizes over 150 active volunteers, ranging in age from 15 to 70, and representing a mix of Hawaii's ethnic groups and occupations. New volunteers are constantly being added to the pool consisting of many people who have participated in the program since its inception. SPs ensure that the community has input into the quality of future physicians that will one day serve it. Post-encounter evaluation by students attest to the ability of the SPs to simulate real patients in a highly believable manner. The CCS provides the rigorous and standardized testing of bedside history taking, physical examination, communication and interpersonal skills required for accreditation by the Liaison Committee on Medical Education (LCME). The University of Hawaii School of Nursing also relies on the CCS to supply patients for the clinical skills assessment of their students.

Prior to the use of SPs, performance-based evaluation of clinical skills was limited by the availability of patients in hospitals who were willing to have medical students examine them. Each student was challenged with patients whose problems varied widely in type and difficulty. The medical student was observed by one of a number of different faculty members. Each evaluator judged clinical competence differently, resulting in arbitrary pass/fail decisions and unreliable comparisons of student performance.

Examinations involving SPs are designed to objectively and systematically compare the clinical skills of all students. Criteria for assessing student performance can be standardized because SPs are able to present the same clinical history or examination findings repeatedly and consistently.<sup>3</sup> Each student is challenged with the same set of patient care scenarios representing a broad range of clinical situations. During a six station Clinical Skills Examination on the Internal Medicine rotation, each student may be required to interview, examine and counsel patients with: 1) chest pain due to an acute myocardial infarction, 2) abdominal pain due to appendicitis, 3) diabetic peripheral neuropathy, 4) chronic cough due to chronic sinusitis, 5) back pain due to herniated intervertebral disc disease, and 6) exposure to HIV infection. The students are allowed from 5 to 30 minutes with each patient depending on the examination. The interview, examination, or task in each station is limited so that it can be completed in the allotted time. Students are scored based on history-taking checklists, and rating scales of interpersonal and communication skills completed by the standardized patients. SPs can be trained to make consistent, accurate and reliable observation of each student.<sup>4</sup> After examining each patient, the student completes a post-encounter exercise by answering written questions regarding the patient encounter and is graded based on predetermined criteria. Scores on SP-based clinical skills examinations have

been shown to predict subsequent performance in residency training.<sup>5</sup>

The SP program provides feedback to both the students and the school in general. Students receive performance data comparing their communication and interpersonal skills to those of their peers. The clinical departments are given feedback generated from overall class performance. For example, data comparing the performance of third year students assigned to the recently developed longitudinal clerkship with the students on the traditional clerkships revealed no difference in clinical skills examination scores, and provided reassurance that all students were receiving adequate training. Student performance on specific SP scenarios guide changes in the curriculum. Poor performance by students on the back pain station identified this topic as needing more formal instruction. Examination data also revealed that the students were not receiving experiences in counseling patients on HIV risk and in giving patients bad news.

SP-based Clinical Skills Examinations are used in Canada to test candidates for physician licensure.<sup>6</sup> Students from foreign medical schools are also required to complete successfully an SP Examination as part of the ECFMG certifying examination.<sup>7</sup> The availability of SP examinations attracts students from Asian medical schools to enroll in our International Medicine Externship programs. The National Board of Medical Examiners (NBME) plans to implement a SP Clinical Skills Examination as part of the licensure process for all U.S physicians.<sup>8</sup> JABSOM has been a pilot site for the NBME SP exam since 1994, and is currently represented on the NBME SP Test Materials Development Committee. This activity has contributed to the national recognition that our school has received in the area of innovations in medical education.

### Summary

Standardized patients are volunteers from the community who participate actively in the teaching and evaluation of our future physicians. The SP program augments medical student learning in both clinical and basic sciences by providing opportunities to practice on patients who are available and willing to be examined. SPs allow "teachable moments" to be created, rather than waited for. SP-based examinations are the most reliable and standardized methods for performance-based assessment of bedside clinical skills. The problem-based-learning (PBL) approach to medical education at JABSOM is designed to foster self-directed learning, interpersonal skills and early hands-on clinical experiences. JABSOM SP experiences are integrated within the PBL curriculum. The CCS and SPs are now vital components of the JABSOM educational model.

### References

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